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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/687,436	10/16/2003	Franz Kummer	99P5545CON1	8037
24252	7590	09/13/2005		
OSRAM SYLVANIA INC 100 ENDICOTT STREET DANVERS, MA 01923			EXAMINER KOSLOW, CAROL M	
			ART UNIT 1755	PAPER NUMBER
DATE MAILED: 09/13/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/687,436

Applicant(s)

KUMMER ET AL.

Examiner

C. Melissa Koslow

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 05 August 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 12-52 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 12-31 and 41-52 is/are allowed.
- 6) ☒ Claim(s) 32-40 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 5/4/05.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

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This action is in response to applicants' amendment of 5 August 2005. The terminal disclaimer filed on 5 August 2005 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of U.S. patents 6,669,866 and 6,504,179 has been reviewed and is accepted. The terminal disclaimer has been recorded. The amendment to the specification have overcome the objected to as failing to provide proper antecedent basis with respect to the subject matter of claims 41 and 48 and the 35 USC 112 rejection over claims 41-52. Applicant's arguments with respect to the remaining objections and rejections have been fully considered but they are not persuasive.

JP 10-247750, cited in the Information Disclosure Statement of 4 May 2005, has been considered with respect to the provided English abstract.

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: The processes of claims 32, 33, 35, 36, 39, 40, 42, 44, 45, 47 and 49-52 are not found in the specification. The only teaching of the process for making a phosphor having the claimed formula is found in the examples, where the flux is limited to boric acid or boric acid and barium fluoride, the firing conditions for the one firing step method is 1550°C for six hours. These teachings do not support the claimed process where the firing conditions are those that will produce the phosphor or where the total firing temperature range is 1450-1550°C and there is no indication that the amount of the B oxide and aluminum oxide is in excess.

The teachings in the examples does not provide antecedent basis for the claimed limitations. With respect to the temperatures in the examples, the single step is only shown at 1550°C and the dual step teaches a first step of 1450-1550°C and a second step at 1500-1550°C.

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These teachings do not provide antecedent basis for the temperature range of claim 32, the range in claim 39 and the range for both steps in claims 42 and 50. There is nothing in the specification to allow for variations in the ranges in the examples. It is not clear from examples that there is an excess amount of boron oxide and aluminum oxide used in the process and that  $\text{BaF}_2$  can be used by itself as a flux. Thus applicants' arguments are not convincing and the objections are maintained.

Applicants are reminded that this is not a 35 USC 112 first paragraph written description issue, but an antecedent basis issue. Thus to overcome these objections, applicants simply need to insert the subject matter of claims 32, 33, 35, 36, 39, 40, 42, 44, 45, 47 and 49-52 into the specification. The subject matter of claims 32, 33, 35, 36, 39, 40, 42, 44, 45, 47 and 49-52 is part of the original disclosure.

Claims 32-40 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for producing a phosphor having the formulas in claims 32 and 38 by intimately mixing oxides of cerium, A and B and a flux of boric acid or boric acid and barium fluoride and firing the mixture in a forming gas at  $1550^\circ\text{C}$  for six hours does not reasonably provide enablement for by intimately mixing oxides of cerium, A and B and firing the mixture in a forming gas at the conditions to form the phosphor. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims.

The claims recite forming a terbium containing garnet by intimately mixing oxides of cerium, A and B and firing the mixture in a forming gas at the conditions to form the phosphor. This encompasses any temperature conditions and flux, such as heating in the range of about

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900-1700°C and the metal fluoride fluxes as taught by U.S. patent 6,596,195. However, the specification only teaches the flux is boric acid or boric acid and barium fluoride and the heating temperatures in the ranges of 1450-1500°C. Such a limited disclosure does not support the breadth of the instant claims. The examiner suggests the incorporation of the disclosed fluxes and temperature ranges in to the claims or into the specification to overcome the rejection.

Applicants' arguments do not address the scope of enablement rejection, but address a lack of enablement rejection. The rejection is that the process conditions in the rejected claims are broader in scope than the process conditions in the specification, not tat the claimed process is not enabled. The rejection is maintained. It is noted that the insertion of the subject matter of claims 32, 33, 35, 36, 39 and 40 into the specification will overcome the above rejection.

Claims 12-31 and 41-52 are allowable over the cited prior art of record. The cited prior art does not teach the claimed method of using and making the claimed TAG phosphor.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melissa Koslow whose telephone number is (571) 272-1371. The examiner can normally be reached on Monday-Friday from 8:00 AM to 3:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo, can be reached at (571) 272-1233.

The fax number for all official communications is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

cmk  
September 9, 2005

  
C. Melissa Koslow  
Primary Examiner  
Tech. Center 1700